La Grande Ranger District

Wallowa-Whitman National Forest
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(541) 963-7186

February 12, 2021

Dear Project Partner,

The La Grande Ranger District (the district) would like your constructive feedback on the **Five Points Fuels Reduction Project (Five Points project)**. The district proposes up to 3,000 acres of treatment within the Five Points watershed. The project area is located 5 air miles northwest of La Grande, OR at Townships 2 south, Range 37 east.

For an interactive visual proposal, please visit our storyboard at:
https://storymaps.arcgis.com/stories/3520f031e6f4477da943c00a37ed7012

Background and Existing Conditions

Historic Management

Fire suppression, large tree harvest, and grazing within the project area created the historically uncharacteristic stand conditions we see today. District specialists identified an imbalance of important forest structures compared to the historical range of variability (HRV). This imbalance degrades forest resilience, limits wildlife habitat, and increases the risk of stand mortality from drought, insects and wildfire.

Developments at Risk

The Five Points project area contains 3,430 acres of the La Grande Valley Wildland Urban Interface (WUI) which includes residences and private forestlands. A WUI area, as defined in the Union County Community Wildfire Protection Plan (CWPP, revised 2016), is "An area strategically identified that provides effective wildfire defense for communities, infrastructure, and other values at risk or intermingle with wildland fuels and offer opportunities for broadened mitigation measures designed to interrupt wildfire spread and modify wildfire behavior in order to protect social, economic, and environmental interest." The project area also shares a boundary with Mount Emily Recreation Area (MERA) and the Five Points Roadless area. Current stand conditions make these highly valued areas vulnerable to wildfire transmission.

Past investment in forest thinning and fuels reduction activities have occurred on adjacent national forest, county, and non-industrial private forestlands. The cross-boundary approach for treatments within the Five Points area was designed to reduce wildfire transmission potential and fire intensity on the main ridgeline dividing the Five Point drainage and Grande Ronde Valley. Integration of the Five Points project with both recently completed and planned work on adjacent private and county lands helps

promote fire adapted communities and restore resilient landscapes as envisioned by the National Cohesive Wildfire Strategy (CWS).

Wildfire

Fire regime condition class (FRCC) is a measure of stand departure from the historical natural fire regime. Departures can result in changes to one or more of the following ecological components: vegetation (species composition, structural stages, stand age, canopy cover and mosaic pattern across the landscape); fuel composition; fire frequency, severity, and pattern. Modeling in the project area shows roughly half of the project area has moderate to severe departure (FRCC 2 and 3) from historic conditions. These conditions create an elevated risk for uncharacteristic fire behavior.

There is high potential for a wildfire to become established within the adjacent Mt. Emily Roadless Area and progress towards the La Grande Valley WUI. There is also a high potential for a fire to be ignited in the Grande Ronde River corridor south of the project area from either a passing car on Interstate 84 or from freight train sparks along the railway. Terrain and fuels within the watershed create conditions for a rapidly moving wildfire.

Wildlife

The Five Points watershed historically sustained dry upland forest habitat for wildlife species dependent on large trees and open foraging conditions. Heavy fuel loading and overstocking compromise the habitat suitability of these stands by increasing the risk for uncharacteristic disturbance events which threaten the survival of remaining large ponderosa pine.

Insect and Disease Presence

The degree of insect activity and disease presence varies within the project area. Species composition, stand density, tree size, and tree vigor factor into stand's response to insect activity and susceptibility to disease. Mountain Pine Beetle, larch casebearer moth, Western Pine Beetle, Fir Engraver, and Balsam Wooly Adelgid all reside within the project area and have created patches of high tree mortality and increased breeding populations. Tree diseases in the project area include annosus and armillaria root infections, Indian paint fungus, lodgepole cankers, heart rots and dwarf mistletoe.

Vegetation

Potential Vegetation Groups: (PVG) is an aggregation of plant association groups (PAGs) with similar environmental regimes and dominant plant species. Each aggregation (PVG) typically includes PAGs representing a predominant temperature or moisture influence (Powell 2019).

Table 1. Potential Vegetation Groups within the project area

PVG within the Project area *(Upland Forest Only)*		
PVG	Acres	% of project area
Cold Upland Forest	13	.5
Dry Upland Forest	1,671	36
Moist Upland Forest	2,198	48

Other	707	15.5
Total	4589	100

Cold Upland Forest *(0.5% of the project area)*

- This forest type represents less than 1% of the project area and will not receive treatment, therefore will not be discussed further.

Dry Upland Forest Group Characteristics *(36% of the project area)*

- Low to moderate productivity.
- Stands were historically maintained by fire and dominated by shade intolerant species like western larch and ponderosa pine.
- Species composition in these stands are now a mix of grand fir, Douglas-fir and ponderosa pine with some lodgepole, Engelmann spruce and western larch.
- Understory conifers are dominated by seedlings and saplings mostly of grand fir and Douglas-fir .
- Ground vegetation is dominated by snowberry, pinegrass, and elk sedge.

Moist Upland Forest Group Characteristics *(48% of the project area)*

- Most productive sites in the Blue Mountains
- Species composition in these stands are a mix of species and size classes with predominantly Douglas fir, grand fir, followed by lodgepole pine, spruce and subalpine fir cover types.
- Early seral species-western larch and ponderosa pine occur within these stands especially where intermixed with dry upland forests.
- Understories are dominated by ocean spray and big huckleberry, and twinflower.

HRV Analysis

Historic Range of Variation (HRV) is meant to reflect ecosystem properties free of major influence by Euro- Americans.,HRV can provide insights into ecosystem resilience and ecosystem capacity including disturbance regime functions and inherent variation in ecosystem conditions and processes (USDA Forest Service 1997). HRV represents stand and landscape conditions historically more resilient to drought, insects, pathogens and severe wildfire. The following table compares existing structures to the project area HRV by Potential Vegetation Group (PVG).

Table 1. HRV Analysis for the Five Points Watershed (38,403 acres)

	Potential Vegetation Group (PVG)					
	Cold Upland Forest		**Moist Upland Forest**		**Dry Upland Forest**	
Forest Structure stages	Range of Variation (%)	Existing Condition (%)	Range of Variation (%)	Existing Condition (%)	Range of Variation (%)	Existing Condition (%)
Stand Initiation	20-45%	43.0	20-30%	11.39	15-30%	18.77
Stem Exclusion	15-30%	2.6	20-30%	6.90	10-20%	10
Understory Re-initiation	10-25%	48.1	15-25%	63.22	0-5%	61.21

Old Forest Single Strata	5-20%	0.0	10-20%	0.02	40-65%	0.19
Old Forest Multi Strata	10-25%	6.2	15-20%	19.68	1-15%	10.65

As depicted in the table above, both dry and moist PVGs are outside of their historic ranges for most stand structures.

- Dry PVG – understory re-initiation is overrepresented and old forest single strata is underrepresented.
- Moist PVG - Stand initiation, stem exclusion, old forest single strata structure all underrepresented. Understory re-initiation stage is overrepresented.

Purpose and Need for Action

The district identified a set of resource conditions within the planning area that do not meet desired future conditions outlined in the 1990 Wallowa-Whitman Land and Resource Management Plan (Forest Plan), as amended. To reduce the gap between desired and future conditions there is a need to:

1. Restore and maintain vegetative conditions and wildlife habitats consistent with the historic range of variation in terms of vegetation composition, structural stages, and disturbance patterns (fire regimes).
2. Create and maintain fuel profiles within the project area that minimize risk to firefighter safety, public, adjacent private and county lands, natural resources, and developed lands (ex. Private residences/structures, Mount Emily Recreation Area) in the event of a wildfire.
3. Create and maintain vegetative conditions that are more resistant and/or resilient to anticipated increases in fire frequency and severity due to climate change.

Proposed Action

We selected treatment units based on the following elements:

Treatments are focused on previously managed stands.

Most units have records of previous management. Units with no documented management records have large diameter stumps scattered throughout, indicating historic removal of large diameter early seral species .

Treatments are located adjacent to existing open and closed roads for unit access.

No new system roads are proposed.

Unit proximity to high-use National Forest System (NFS) roads prevents these areas from functioning as satisfactory security habitat for big game species. We determined the project area includes sufficient cover and foraging habitat for big game species away from roads, and we do not plan to treat these critical habitat areas.

Units close to roads may serve as strategic fuels breaks. Treatment along these roads would improve fire management options and create conditions that reduce risk to firefighter safety.

Units have soil types and topographic positions that are likely to experience droughty conditions into the future.

Droughty Soil Probability identifies soil types that have a thin organic layer, a high bulk density, and parent material with decreased available water capacity (see soil map in Appendix B). Available water capacity is the maximum amount of water soil can provide to plants. Areas with droughty soil probability above 60% do not provide water for plants during drought. Lack of available water decreases plant vigor and reduces the ability to mount a defense against insect and disease.

Areas with droughty soils can occur in both dry and moist PVGs. Drought tolerant species have a competitive advantage growing on these soil types, because they are adapted to maintain vigor throughout drought periods (summer months). Planned treatments will favor retention of more drought tolerant species such as ponderosa pine.

Treatments proposed within fire regime condition class 2 or 3.

Most commercial treatments are proposed within dry PVG stands with moderate to high departure from historic conditions and where the expected fire regime is high frequency and low severity. Moist forest treatments focus on areas where remnant fire-tolerant western larch and ponderosa pine indicate large-diameter, widely spaced, and early seral species existed historically.

Management strategies in dry pine dominated forest benefit dry and moist mixed conifer forest.

Protecting old trees, reducing surface fuels, reducing overall forest density, and shifting composition from fire intolerant to fire tolerant species benefits both pine dominated forest and mixed conifer forest. Wildlife use and ecological processes that were historically characteristic of moist mixed conifer forests were compatible with lower densities and basal area than exist today (Margolis and Malevich, 2016). Intermixed moist and dry mixed conifer forest experienced similar fire disturbance regimes as ponderosa pine stands in the past and are likely to experience similar fire disturbance regimes in the future (Johnson, 2017).

Dry forest management actions support habitat conservation strategies.

Avian focal species are a comprehensive tool to support ecosystem management, because conservation is directed at the range of important habitat conditions for birds within the ecosystem. Three avian focal species that prefer dry forest habitat were identified within the project area (White-headed woodpecker, Flammulated owl, Lewis's woodpecker). To support these species, we designed restoration strategies to enhance dry forest habitats. These treatments promote large tree, single-layered canopy with an open, park-like understory dominated by herbaceous cover, scattered shrubs, and patches of pine regeneration. Restoring dry forest to promote these conditions would positively impact conservation strategies for theses focal species (Altman and Bresson, 2017).

PDCs and Mitigations

District specialists incorporated design criteria that minimize impacts to sensitive resources such as wildlife, riparian habitats, aquatic species, heritage resources, rangeland, botanical resources and invasive plants.

Plants	
PL-1 Avoidance	Exclude known sensitive plant population locations from ground disturbing treatments by implementing a no-disturbance buffer around each site. Avoid ground disturbing activities on previously undisturbed non-forested terrain.
PL-2 RHCAs	Exclude direct ignition of prescribed fire within Riparian Habitat Conservation Areas (RHCAs); but allow low intensity prescribed fire to back into these areas. Follow Forest Plan standards and guidelines for protecting RHCAs from ground disturbing activities.

Fisheries	
FISH-1 RHCAs	Stream and riparian protection are based on Forest Plan as amended by PACFISH-INFISH. PACFISH-INFISH standards and guidelines related to timber harvest, roads, and fire apply to this project. Category 1 – Fish bearing streams: RHCA consist of the stream and the area on either side of the stream extending 300 feet slope distance from the edges of the active stream channel. Category 2 – Perennial non-fish bearing streams: RHCAs consist of the stream and the area on either side of the stream extending 150 feet slope distance from the edges of the active stream. Category 3 – Ponds, lakes, reservoirs, and wetlands greater than 1 acre: RHCAs consist of the body of water or wetland and the area to the outer edges of the riparian vegetation, or the extent of the seasonally saturated soil, or 150 feet slope distance from the edge of the maximum pool elevation of constructed ponds and reservoirs or from the edge of the wetland, pond or lake, whichever is greatest. Category 4 – Seasonally flowing or intermittent streams, wetlands less than 1 acre, landslides, and land-slide prone areas: This category includes features with high variability in size and site-specific characteristics. At a minimum the RHCAs must include: the area from the edges of the stream channel, wetland, land slide, or land-slide prone area to a distance equal to 100 feet slope distance.
FISH-2 Protection of Fish Habitat	Prescribed fire ignition will not occur within 300 feet of Category 1 streams, 150 feet of any Category 2 streams, and 100 feet of Category 4 streams. Low and moderate intensity backing fires will be allowed within the no ignition buffers. When drafting water, sources would be monitored for reduced flow. During low flow conditions (less than 5 cfs), spring fed ponds would be used as sources prior to the use of stream sources whenever feasible. Refueling, repair, and maintenance of equipment would be done at landings or on forest roads outside of RHCAs. Fuel would not be stored within any RHCA. Timber sale purchaser would prepare a spill containment plan that would ensure that spilled fuel would not leave the site of the spill. Avoid impacting live or dead trees associated with temporary roads, culverts, or maintenance on existing roads in RHCAs. If safety or other hazardous trees are observed during implementation, work with a District Fish Biologist or Hydrologist to place the tree in the stream to help move large wood RMOs towards Forest Plan standards.

FISH-3 Roads	State of Oregon in-stream work window (July 1 thru October 31) will be followed for all road maintenance activities occurring within stream banks. Temporary culverts will be installed during dry conditions on Category 4 streams. After completion of the project, these structures will be removed and hauled from the project area. Banks of crossings will be reshaped to match undisturbed sections adjacent to the crossing. Slough and waste materials removed during road maintenance activities, including ditch and culvert cleaning, would be deposited in approved disposal sites outside RHCAs. For erosion control and stabilization, the disposal site would be seeded with native seed. During road maintenance and snow plowing, side cast of materials would not occur where these materials could be directly or indirectly introduced into a stream, or where the placement of these materials could contribute to the destabilization of the slope. Road reconstruction would limit vegetation modification to the road prism, road surface, and ditch lines to that work necessary to maintain a safe travel way and functional drainage system. Ditches would only be maintained where the water captured by the ditch is not able to be transported to the adjacent drainage structure that carries the water across the road.

Wildlife

WL-1 Down Woody Material

Where material is available, all treatment units (harvest and prescribed burn) would exceed the minimum levels for down woody material described in the table below for each species.

SPECIES	PIECES PER AC	TONS PER AC	PIECE LENGTH AND DIAMETER SMALL END Diameter | Min Length	TOTAL LINEAL LENGTH
Ponderosa Pine	3-6	5-10	12” | 6ft	20-40 ft
Mixed Conifer	15-20	7-15	12” | 6ft	100-140 ft
Lodgepole pine	15-20	7-15	8” | 6ft	120-160 ft

WL-2 Snags

All snags would be retained unless identified as posing a safety hazard. Snags felled for safety reasons would be retained onsite to contribute to coarse wood where coarse wood amounts are deficient.
To reduce the potential for loss of snags during prescribed burning, employ passive lighting techniques near snags larger than 12 inches.

- Techniques should consider slope, wind, and fuel characteristics to encourage a backing fire.
- Unit prep should include scraping down to bare mineral soil around the base of large snags (> 21 inches dbh) at higher risk due to heavy fuels accumulations at the base, pullback of fuels may be necessary prior to prescribed burning.

WL-3 Green Tree Replacement (GTR)

Sufficient green trees of adequate size are to be retained in harvest units to provide replacements for snags and logs through time. GTRs need to be retained at a rate of 25-45 trees per acre, depending on vegetation group.

- All harvest prescriptions in the project would retain GTRs within or above this range. See the WWNF Green Tree Snag Replacement Guidelines for details associated with managing for induced mortality.
- No live trees greater than or equal to 21 inches DBH would be cut unless they create a safety hazard during logging operations.

WL-4 Raptors and Cavity Nesters

Active raptor nest sites found during field reconnaissance for this project would be protected during project activities. If active raptor nests are located during layout, marking, or project activities, appropriate protection measures would be prescribed as described in the Wildlife Inventory document in the project file.

WL-5 Goshawk Nest Sites	No active goshawk nests were located during surveys within treatment units, and a follow-up survey will be conducted prior to project implementation. Surveyors located one historic goshawk nest in the project area that is well outside of the proposed treatment area which incorporates Eastside Screens mitigation measures. • If goshawk nesting is confirmed during additional surveys or project implementation, a 30 acre no treatment zone around nest trees would be applied, and a 400 acre Post Fledging Area (PFA) would be established with treatment restrictions outlined in the Eastside Screens.
WL-6 Big Game Winter Range	Logging operations would be avoided during the period between December 1 through April 1 in the project area units. This is to ensure protections for big game during a sensitive period. Waivers to operate during this time period may be requested and would be evaluated on a case by case basis by the District Ranger.
WL-7 Management Indicator and Neotropical Migratory Species	If management indicator species are discovered within prescribed burning units the following protective measures could be applied, either separately or in combination, to reduce possible impacts to snags with nest cavities and to protect other nest sites during burning: • Prep around snags to bare mineral soil and eliminate ladder fuels • varied lighting techniques (use a backing fire) • fall burning or deferred burning until after the unit is no longer being used during the reproductive period • To reduce the potential for impacts to nesting land birds, prescribed burning activities projected to occur on or after May 20, and/or past the onset of vegetation leaf-out, would be reviewed by a district or forest wildlife biologist. The District Biologist would then provide recommendations concerning prescribed burning after May 20 and/or past the onset of vegetation leaf-out.

Invasive Species	
INV-1 Roadside populations	Treatment of the noxious weed sites located along roads should be a high priority, along with monitoring. • Rock pit and sources should be inspected and cleared prior to use of any materials. • Before road maintenance activities on roads with active infestations occurs the contracting officer (COR) will contact the District Noxious Weed Coordinator, to inform them of maintenance plans. The Noxious Weed Coordinator will take the appropriate action to treat the noxious weeds on the infested portions of these roads. (Note: Recommended treatment includes removal of previous year's stalks, to be conducted before maintenance activities occur there; and maintenance activities should not be conducted after the current year's plants have bolted and flowered (mid to late June) unless prior treatment of current year's growth occurs.)
INV-2 New populations	If new noxious weed infestations are located within the project area, a noxious weed inventory and site assessment (as defined in the W-W INWMP) will be completed. Location of other species, conditions or future treatments may require additional analysis to determine the appropriate treatment method.
INV-3 Known Populations	All mapped weed sites will be designated as "Areas to Protect" and include in the contract package for use by the contract administrator. • Staging areas should not be built on or near sites of noxious weed infestation.
INV-4 Post-treatment	Highly disturbed areas will be seeded. The seed mix to be used will consist of native species, or a non-native species mix, to be approved by the District Diverse Species Program Coordinator. This may include one fast germinating annual grass species to provide immediate ground cover. Seed application rates will be adjusted, as needed to compensate for the broadcast method of application, and to generate vegetation densities adequate to help in deterrence of noxious weed invasion. • Seed will be certified weed free, per the Wallowa-Whitman INWMP protocol. • All hay or straw used for mulching, erosion control, or other rehabilitation purposes will be weed free (per the Wallowa-Whitman INWMP protocol).

INV-5 Equipment Requirements	All equipment to be operated on the project area will be cleaned in a manner sufficient to prevent noxious weeds from being carried onto the project area. • This requirement does not apply to passenger vehicles or other equipment used exclusively on roads. Cleaning, if needed, will occur off National Forest System lands. • Cleaning will be inspected and approved by the Forest Officer in charge of administering the project.

Soils	
SQ-1 Greater than 20 percent Detrimental Soil Conditions	In areas where **more than 20 percent** detrimental soil conditions exist from prior activities, the cumulative detrimental effects from project implementation and restoration must, at a minimum, not exceed the conditions prior to the planned activity and should move towards a net improvement in soil quality (R6 Soil Quality Standards) by rehabilitating landings and used skid trails as needed through de-compacting to bring post-activity DSCs to acceptable levels in each activity area.
SQ-2 Less than 20 percent Detrimental Soil Conditions	In areas where **less than 20 percent** detrimental soil conditions exist from prior activities, the cumulative detrimental effect of the current activity following project implementation and restoration must not exceed 20 percent. In units expected to exceed 20 percent detrimental soil conditions: 1. Rehabilitate landings and used skid trails as needed through de-compacting to bring post-activity DSCs to acceptable levels in each activity area. 2. If de-compacting is not feasible (i.e., shallow, clayey, rocky and/or topographic constraints) restrict harvest activities to winter harvest conditions. 3. If none of the above actions are feasible, then the treatment area should be excluded from mechanical activities.
SQ-3 Seasonal Conditions	Limit equipment operations to frozen, snow-covered or acceptable soil moisture conditions. Limit machine pivots and turns, where possible. During the winter season ground conditions shall meet at least one of the following criteria for machine operations: 1. Six inches of frozen ground, 2. Four inches of frozen ground with one foot of snow, 3. Two feet (>24 inches) or more of snow, 4. One foot (>12 inches) slash mat in combination with one foot of snow, or 5. Soil moisture conditions acceptable for minimizing rutting or puddling of soils Some “watch-out” situations include: 1. Machine break-through begins to occur 2. Equipment tracks sink deeply (half the width of the track) below the soil surface with one or two passes 3. Ruts greater than six inches deep form 4. Mid-day temperatures are forecast to rise above freezing 5. Surface melt occurs over still-frozen subsurface
SQ-4 Shallow Soils	Avoid operating on shallow soils (<25 cm soil depth) and meadows unless over frozen ground/snow. Shallow soils and clayey soils should not be used for temporary roads, skid trails, slash piles, or log landings; unless no other location is practical and there is an existing prism in which case equipment activity should remain within existing prism as much as possible.
SQ-5 Udic Soils	Avoid early summer equipment operations on units with udic moisture regime (moist soils with inherent excess soil moisture either yearlong or on a seasonal basis). If this is not possible or there is evidence of lingering moisture present, operate on a bed of slash maintained at >12 inches to mitigate compaction and rutting.

SQ-6 Soil mitigations during ground-based operations	Ground-based equipment should not operate on sustained slopes exceeding 35%. Prioritize areas of slopes greater than 35% as leave areas within units. Designated skid trails should be spaced on average 100 feet apart, and the trails should average no more than 12 feet in width. Closer spacing due to complex terrain will be with Timber Sale administrator approval. Existing skid trails will be used as much as possible. 1. If equipment must leave designated trails for operational purposes, no more than two passes over any piece of ground is permitted. 2. Ensure that water control structures (water bars or slash surfacing, as approved by the Sale Administrator or COR) are installed and maintained on skid trails that have gradients of 10 percent or more; Ensure erosion control structures are stabilized and working effectively before spring runoff. When cut to length harvest systems are used, maintain an appropriate slash mat of at least 12" when possible during operations to prevent equipment weight from altering soil bulk density and causing displacement of effective ground cover. If unable to maintain an appropriate slash mat, impacts are expected to be the same as tractor logging.
SQ-7 Shallow and Nutrient Poor Soils	Whole-tree yarding methods should be avoided in shallow soils (<25cm), nutrient-poor (granitic soil, glacial outwash sands, many coarse-textured soils) soils or in sensitive areas. If not possible, backhaul slash and redistribute on skid trails to an average depth of 6 inches within the harvest area, and extend the period for reentry to allow more time for nutrient inputs.
SQ-8 Soil mitigations for slopes >35%	Use advanced logging systems where treatment is planned for continuous slopes greater than 35%. Advanced logging systems may include a variety of techniques including, but not limited to, cable yarding or other advanced logging systems where adequate protection against soil compaction and displacement can be demonstrated. 1. Use directional hand falling of trees and winching on slopes greater than 35% that cannot be reached by harvesting equipment from designated skid trails, as much as possible. Leading end suspension should be implemented when cabling or skidding material. 2. Skid trails or yarding corridors on slopes greater than 35% used by the purchaser should be reclaimed by applying appropriate erosion control measures such as the placement of effective ground cover in conjunction with, or in place of, water bars for rehabilitation.
SQ-9 Slope Instability & Mass Movement	Signs of slope instability and mass movement include cracks in soil, tilted or bent trees, increased spring activity or newly wet ground, hummocky or uneven terrain, sunken or broken roadbeds, and/or a recent sag pond has formed that isn't human created. If visual evidence of landslides appears inside or near proposed management activities, treatment will be avoided as appropriate, to ensure potential slope failure is mitigated.
SQ-10 Organic matter mitigation	Strive to maintain fine organic matter (commonly referred to as the duff layer) over at least 65 percent of an activity area following both harvest and post-harvest operations. Keep fine organic matter disturbance to a minimum if the potential natural plant community on site is not capable of producing fine organic matter over 65 percent of the area (Regional Soil Quality Guidelines / FSH 2090.11).
SQ-11 Soil erosion mitigations	Prior to a large autumn precipitation event, ensure necessary water control structures are installed and maintained on skid trails over 10% slope after all ground-disturbing activities. Ensure erosion control structures are stabilized and working effectively and ensure that effective ground cover is left. 1. In areas of general disturbance in ash soils, the top layer (A Horizon) should be pulled back over any disturbed surface to prevent permanent loss of productivity. (Pull berms back over disturbed surfaces)

<table>
<tr><td></td><td>2. After completion of land management activities, the minimum effective ground cover (EGC) within each activity area within disturbed areas shall be in place to prevent erosion from exceeding background erosion rates for each of the four established erosion hazard classes: low, medium, high or very high (table below). Effective ground cover is defined as the basal area of perennial vegetation, plus duff, litter, and coarse fragments (greater than 2mm sizes), including tree crowns and shrubs that are in direct contact with the ground.

<table>
<tr><th rowspan="2">Erosion Hazard Class</th><th colspan="2">Minimum Effective Ground Cover</th></tr>
<tr><th>1st Year</th><th>2nd Year</th></tr>
<tr><td>Low</td><td>20-30%</td><td>30-40%</td></tr>
<tr><td>Medium</td><td>30-45%</td><td>40-60%</td></tr>
<tr><td>High</td><td>45-60%</td><td>60-75%</td></tr>
<tr><td>Very High</td><td>60-90%</td><td>75-90%</td></tr>
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</td></tr>
<tr><td>SQ-12
Soil rehabilitation</td><td>In areas where de-compacting is prescribed, de-compact to a depth sufficient to ameliorate the presence of detrimental soil compaction (usually between 2 and 12 inches). Discontinue de-compacting where large rocks are continually brought to the soil surface. If a change in soil color is noticed by the operator, operate at a shallower depth that prevents topsoil and subsoil from mixing. Skid trails requiring rehab on slopes > 30% should use erosion control methods that prevent channelized flow. Picking up ripping tines periodically down the slope.

1. Effective ground cover for all de-compacting treatments should take advantage of harvest slash. If no suitable organic material is available, then weed free straw or other equivalent erosion control measures should be applied on slopes exceeding 15%, adjacent to waterways and ditches (within 100 feet), prior to seasons ending precipitation event. See BMP AqEco-2 for additional information.</td></tr>
<tr><td>SQ-13
Roads</td><td>Non-system or legacy road templates will be used for temporary roads to the greatest extent possible. Creation of new temporary roads will be minimized. Where needed, locate to fit the terrain, and follow natural contours and minimize adverse effects to soil, water quality and riparian resources. Locate roads to fit the terrain and follow natural contours. Placement of new temporary roads should be on deep soils, as possible and avoid temporary roads on clay-dominated soils. Any new temporary roads within RHCAs will be approved by a hydrologist and sale administrator prior to constructing.
Temporary road mitigation measures include:
Locate temporary roads on flat terrain and benches where possible to reduce cut/fill construction and sedimentation risks
Provide adequate drainage through proper location, out sloping and installing water bars as appropriate
Install suitable storm water and erosion control measures (water bars, out slope) to stabilize disturbed areas and waterways before seasonal shutdown of project operations or when severe or successive storms are expected.
Upon completion of use, rehabilitate temporary roads by removing any culverts, decompacting the road surface and covering all disturbed areas with slash. Rehab may also include re-contouring the natural slope profile as possible, masking entrances, and seeding with native plant seed to promote effective ground cover.
Avoid burning of slash and organic material incorporated into road rehabilitation during prescribed fire activities.</td></tr>
<tr><td>SQ-14
Fire and Fuels</td><td>Grapple pile operations would use the same skid trails as harvest operations where possible. Mechanical fuel operations would adhere to ground-based equipment PDCs mentioned above.

Where feasible, pile slash on sites already disturbed by logging activities (e.g. skid trails, landings, and roads) to minimize additional detrimental soil impacts from burning. Avoid locating slash piles on shallow soils (<25cm). Piling slash should not occur above or below culverts or drainages to prevent sediment delivery. If piling fuels near a culvert or drainage, pile fuels away from the culvert or drainage high water flow. Limit hand pile size to less than 50 square feet to reduce organic horizon loss and limit soil heating. Pile burning when duff is moist or wet can reduce organic matter loss and soil heating.

When using a boom-mounted equipment, operator shall plan off-trail travel paths to make full use of the machine’s capability (e.g., using the full boom reach of the machine) to limit ground disturbance and minimize</td></tr>
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	the number of off-trail passes. Reclaim all machine-built fire lines by redistributing displaced topsoil and unburned woody debris over the disturbed surface as needed after burn has been completed. Install water bars on fire lines using the following guideline: 5-15% slope every 150 feet, 16-35% slope every 40 feet, 36-60% slope every 30 feet, and >60% slope every 15 feet. On slopes less than 15%, water bars may not be needed if adequate amounts of slash are available. Slash and organic material that must be incorporated into road rehabilitation should not be intentionally burned.
SQ-15 Low productivity soil mitigation	Adequate amounts of slash should be left within the unit to retain fine organic matter on low productivity soils with inherently lower ability to retain adequate organic matter reservoirs. If Regional Soil Quality Standards and Guidelines are unable to be met because the stand is incapable of producing enough slash, all slash should be left untreated.

Commercial Fuels Reduction and Vegetation Management Treatments

HTH – Commercial Thinning

Variable density commercial thinning removes overtopped, suppressed, and co-dominant trees to reduce competition for site resources and remove ladder fuels underneath mature trees. Remaining trees would be variably distributed and dominated by drought and fire tolerant species. Ten percent of treatment areas would be left untreated and retained for green tree snag replacements and wildlife habitat. These wildlife retention areas should be located outside patches with an abundance of suppressed and diseased grand fir.

With this prescription we plan to:

- Reduce stand densities to the Lower Management Zone, where aligned with the mollisol soil type, to promote large tree structure development ins Stem Exclusion and Understory Reinitiation stand stages.
- Thin (HTH-OFSS) one or more understory layers in approximately 81 acres of dry Old Forest Multi Stratum (OFMS) stands to restore old forest single story structural conditions.
- Units with residual fuel loading after harvest may undergo prescribed burning to reduce surface fuels and promote healthy understory vegetation.

Table 3. HTH Units

Unit Number	Management Area Code	Rx Detail	Acres	PVG	Structure	Structure post RX	FRCC	Drought Probability (%)
1	3	HTH	13.1	DRY UF	SE	UR	1	80-100
2	3	HTH-OFSS	47.3	DRY UF	OFMS	OFSS	1	80-100
7	3	HTH-OFSS	3.9	DRY UF	OFMS	OFSS	1	80-100
9A	3	HTH	4.8	DRY UF	SE	UR	1	80-100
10	3	HTH	72.4	DRY UF	SE	UR	1	80-100

17	3	HTH	25.6	DRY UF	SE	UR	1	80-100
42	1	HTH	19.1	DRY UF	UR	UR-OFSS	1	80-100
43	1	HTH	17.2	DRY UF	UR	UR-OFSS	1	80-100
45	1,3	HTH	34.8	DRY UF/ MOIST UF	UR	UR-OFSS	3	80-100
45A	1	HTH-OFSS	14.2	DRY UF/ MOIST UF	OFMS	OFSS	1	80-100
48	1	HTH	6	DRY UF	UR	UR-OFSS	1	80-100
50	1, 3	HTH	14.5	DRY UF	SE	UR	1	80-100
51	1, 3	HTH-OFSS	6.8	DRY UF	OFMS	OFSS	3	80-100
52	1, 3	HTH-OFSS	8.9	DRY UF	OFMS	OFSS	1	80-100
55	1	HTH	24	DRY UF	SE	UR	3	80-100
57	1	HTH	14.3	DRY UF	SE	UR	3	80-100
Total			326.9					

HIM – Improvement Thinning

Improvement thinning enhances growth and regeneration potential for early seral species. This prescription retains fire and drought tolerant species while removing fire intolerant, damaged, suppressed and/or diseased trees. Residual stand densities would be near the stand's lower management zone consistent with the Historic Range of Variability for species composition. Ten percent of treatment areas will be retained for wildlife habitat and green tree snag replacements. Retention areas will be located outside of pockets with widespread suppressed and diseased grand fir.

With this prescription we plan to:

- Thin stand densities to the Lower Management Zone (LMZ), where aligned with the mollisol soil type, to promote development of large tree structures from Stem Exclusion and Understory Reinitiation stand stages.
- Consider harvest below the LMZ where annosus root rot (unit 44) or Douglas-fir mistletoe (units, 9, 13, 19, 20, 30, 32, 41, 53, 54) disease is widespread and the amount of suppressed late seral species within stands is high. These units may later be interplanted with drought tolerant species.
- Thin approximately 205 acres of OFMS to restore OFSS conditions by removing one or more understory canopy layers (HIM-OFSS)
- Units with residual fuel loading after harvest may undergo prescribed burning to reduce surface fuels and promote healthy understory vegetation.

Table 4. HIM Units

Unit Number	Management Area Code	Rx Detail	Acres	PVG	Structure	Structure post RX	FRCC	Drought Probability (%)
9	3	HIM-OFSS	24.9	DRY UF	OFMS	OFSS	1	80-100
13	1	HIM-OFSS	10.8	MOIST UF	OFMS	OFSS	3	80-100
19	3	HIM-OFSS	46.6	DRY UF	OFMS	OFSS	3	80-100
20	3	HIM	8	DRY UF	UR	UR-OFSS	3	80-100
30	1	HIM	15.7	MOIST UF	UR	UF-OFSS	3	0-20
32	1, 3	HIM-OFSS	47.8	DRY UF	OFMS	OFSS	1	0-20
40	1	HIM-OFSS	16.2	DRY UF	OFMS	OFSS	1	80-100
41	1	HIM-OFSS	18.6	DRY UF	OFMS	OFSS	1	80-100
44	1	HIM-OFSS	36	MOIST UF	OFMS	OFSS	3	80-100
53	1	HIM	12.6	DRY UF	UR	UR-OFSS	1	80-100
54	1	HIM-OFSS	4.4	MOIST UF	OFMS	OFSS	3	80-100
Total			241.6					

Non-Commercial Fuels Reduction and Vegetation Management Treatments

Precommercial Thinning (PCT)

Precommercial thinning decreases densities in young stands to promote the health of remaining drought and fire tolerant species. Treatments involve thinning trees smaller than 9" diameter at breast height (DBH) and leaving selected trees at variable spacing (approximately 20 – 30 ft apart). Ten percent of treatment areas will be retained for wildlife habitat and green tree replacements. Retention areas will be located outside of pockets with widespread suppressed and diseased grand fir.

With this prescription we plan to:

- Mechanically treat (PCT-M) vegetation on slopes 30% or less with a slashbuster or a grapple piling tracked machine
- Treat slash (piled and burned or lopped and scattered) if located in a strategically important area for wildfire response
- Thin approximately 47 acres of OFMS to promote OFSS conditions by removing understory canopy layers less than 9" DBH

Table 5. PCT Units

Unit Number	Management Area Code	Rx Detail	Acres	PVG	Structure	Structure post RX	FRCC	Drought Probability (%)
3	3	PCT-OFSS-M	4.2	DRY UF	OFMS	OFSS	1	80-100
5	3	PCT-M	8.0	MOIST UF	UR	UR-OFSS	3	60-80
6	1	PCT-M	29.9	MOIST UF	UR	UR-OFSS	3	80-100
14	1	PCT-M	6.4	Dry UF	UR	UR-OFSS	1	60-80
15	1,3	PCT-OFSS-M	15.2	Dry UF	OFMS	OFSS	1, 3	60-80
18	3	PCT-M	37.9	MOIST UF	UR	UR-OFSS	1	80-100
21	3	PCT-M	12.5	Moist UR	UR	UR-OFSS	3	0-60
22	3	PCT-M	7.1	MOIST UF	UR	UR-OFSS	3	0-20
23	3	PCT-M	18.8	MOIST UF	SE	UR	3	0-20
24	3	PCT-M	17.5	MOIST UF	SE	UR	3	0-20
25	3	PCT-M	71.9	DRY UF	SE	UR	3	80-100
26	3	PCT-M	11.8	MOIST UF	SE	UR	3	80-100
27	3	PCT-M	19.3	MOIST UF	SE	UR	3	0-20
28	3	PCT-M	53.8	DRY UF& MOIST UF	UR	UR-OFSS	3	0-20
28A	3	PCT-M	32.9	DRY UF	SE	UR	3	80-100
34	1, 3	PCT-M	18.7	MOIST UF	UR	UR-OFSS	3	0-20
35	1, 3	PCT-M	8.9	MOIST UF	UR	UR-OFSS	3	0-20
36	1	PCT-M	19	MOIST UF	OFMS	UR-OFSS	1	0-20
37	1	PCT-OFMS-M	28	MOIST UF	OFMS	OFSS	1	0-20
38	1	PCT-M	3.9	MOIST UF	UR	UR-OFSS	3	0-20
46	1	PCT-M	26.3	MOIST UF	UR	UR-OFSS	3	0-20
47	1, 3	PCT-M	46.3	DRY UF	OFMS	OFSS	1, 3	80-100
58	3A	PCT-M	32.4	MOIST UF	SE	UR	3	40-60
59	3A	PCT-Roadside	8.2	MOIST UF	SE	UR	3	20-40
60	3A	PCT-M	39.5	MOIST UF	SE	UR	3	40-60
61	3A	PCT-Roadside	2.1	MOIST UF	SE	UR	3	40-60
62	3A	PCT-M	76.3	MOIST UF	SE	UR	3	40-60
63	3A	PCT-M	58.3	MOIST UF	SE	UR	3	20-40
64	3A	PCT-M	25.1	MOIST UF	SE	UR	3	0-20

65	3A	PCT-M	91.6	MOIST UF	UR	UR-OFSS	3	0-20
66	3A	PCT-M	18.4	MOIST UF	SE	UR	3	20-40
67	3A	PCT-M	23.8	MOIST UF	SE	UR	3	0-20
68	3A	PCT-M	26.7	MOIST UF	SE	UR	3	0-20
TOTAL			**900.5**					

Treatment Effects on the Historic Range of Variation

Table 6. HRV analysis on forest structural stages before and after treatment.

	Potential Vegetation Group (PVG)									
	Dry Upland Forest					**Moist Upland Forest**				
Forest Structure stages	Range of Variation (%)	Existing Condition (%)	Existing Condition Acres	After Treatment acres	After Treatment (%)	Range of Variation (%)	Existing Condition (%)	Existing Condition Acres	After Treatment acres	After Treatment (%)
Stand Initiation	15-30%	19	2025	2025	19	20-30%	11	1822	1822	11
Stem Exclusion	10-20%	10	1073	800	7	20-30%	7	1104	716	4
Understory Re-initiation	0-5%	61	6603	6718	62	15-25%	63	10111	10176	63
Old Forest Single Strata	40-65%	0	21	431	4	10-20%	0	3	444	3
Old Forest Multi Strata	1-15%	11	1149	897	8	15-20%	20	3147	3030	19

Proposed treatments in both Moist and Dry PVGs would enhance the vigor of underrepresented early and mid-seral species and help restore a species composition reflective of the historic range.

The proposed treatment would move forest structures toward the historic range by emphasizing development of old forest single strata.

- Treatments in OFMS would directly transition stands into OFSS.
- Treatments in stem exclusion would convert to understory reinitiation structure, setting the stand on a 10-15 year trajectory into old forest single story.

Conversion into either OFSS or understory reinitiation would reduce inter-tree competition for light, water and other resources, increase the vigor of residual early seral species, decrease morbidity, and decrease risk of wildfire mortality. Old forest single strata, the desired forest structure of stands in this project area, is more resilient to wildfire than stem exclusion, understory reinitation and old forest multi strata. This is because OFSS has limited ladder fuels that may allow transmission risk of ground fire to

crown fire and the main canopy consists of large diameter trees that have thick bark and are resilient to low intensity fire. Restoration of OFSS conditions will also benefit avian focal species including White-headed woodpecker, Flammulated owl, and Lewis's woodpecker.

Prescribed Burning

Prescribed burning reduces surface fuels, thins suppressed trees, and increases canopy base heights. Planned ignitions, when appropriately timed for moderate fuel moistures, generally burn with lower intensity and severity than wildfire. Control lines include roads, natural barriers, and brush removal rather than bare mineral soil line construction, where possible.

Fuels blocks: 1,232 acres

Removal Systems Summary

Proposed harvest treatments would remove approximately 5.6 million board feet of saw and 2.7 million board feet of non-saw material using the following yarding systems:

- 557.5 acres ground based yarding systems

The district proposes approximately 14.35 miles of road maintenance, including installation of 3 culverts. Approximately 7.79 miles of administratively closed roads would be re-opened to facilitate harvest and fuel reduction activities.

The project requires less than 1.31 miles of temporary roads to facilitate harvest systems. One, or a combination, of the following methods, would restore temporary roads to the productive land base after project implementation:

- Ripping to reduce soil compaction
- Seeding with native species
- Camouflaging roads to discourage use

The district does not propose any new construction of permanent roads.

Post Sale Road Management Plan

No permanent changes to the existing road system are proposed.

Implementation

The district anticipates implementation of this project beginning in 2022.

Collaboration

The District led two field trips for interested parties on August 6th and October 2nd, 2020. We had representatives from Oregon Wild, Union County, Greater Hells Canyon Council, Woodgrain, Wallowa-Whitman Forest staff, and Oregon Department of Fish and Wildlife in attendance. We also shared our preliminary project proposal with the Northern Blues Forest Collaborative.

Categorical Exclusion

We have designed this project to comply with the authority granted by section 605 Healthy Forest Restoration Act (16 U.S.C. 6591d) (FSH 1909.15, 32.3(9)) (DM Required). This project was developed to promote wildfire resilience.

The project is in an area designated prior to March 23, 2018 in accordance with section 602(b) and (c) of the Healthy Forest Restoration Act.

- The proposed treatments are located in wildland urban interface **and/or** in Condition Classes 2 or 3 and Fire Regime Groups I, II, or III outside the wildland urban interface that contain very high wildfire hazard potential.
- The project maximizes the retention of old-growth and large trees, as appropriate for the forest type, to the extent that the trees promote stands that are resilient to insects and disease, and reduce the risk or extent of, or increase the resilience to, wildfires.
- The project is not located: in congressionally designated Wilderness and Wilderness Study Areas; in areas where the removal of vegetation is restricted or prohibited by statute or by Presidential proclamation; or in areas where the activities described above will be inconsistent with the applicable Land and Resource Management Plan.
- The project's total amount of area treated does not exceed 3,000 acres.
- The project does not include the establishment of permanent roads. Temporary roads will be constructed but will be decommissioned no later than three years after the project is completed.
- Public notice and scoping has been/will be conducted.
- The project was/is being developed through a collaborative process that includes multiple interested persons representing diverse interests and is transparent and non-exclusive; **or** meets the requirements for a resource advisory committee under subsections (c) through (f) of section 205 of the Secure Rural Schools and Community Self-Determination Act of 2000 (16 U.S.C. 7125); **or** complies with the eligibility requirements of the Collaborative Forest Landscape Restoration Program under section 4003(b) of the Omnibus Public Land Management Act of 2009 (16 U.S.C. 7303(b).
- The best available scientific information is being considered to maintain or restore ecological integrity, including maintaining or restoring forested vegetation structure, function, composition and connectivity.
- All activities proposed under this project are consistent with the Land and resource management plan.
- Extraordinary circumstances are being considered during the analysis and decision-making process.

Scoping Comments

District specialists will consider issues raised in scoping letters to help refine our proposal before a decision is made. Specific written comments should be within the scope of the proposed action, have a direct relationship to the purpose and need, and include rationale for the responsible official to review. We must receive your scoping comments by March 17, 2021 for consideration in this project.

Written comments should be addressed to Bill Gamble and emailed to: comments-pacificnorthwest-wallowa-whitman-lagrande@usda.gov. If you have any questions, please contact me william.gamble@usda.gov.

Sincerely,

Bill Gamble
District Ranger
La Grande Ranger District